

FIG. 1A

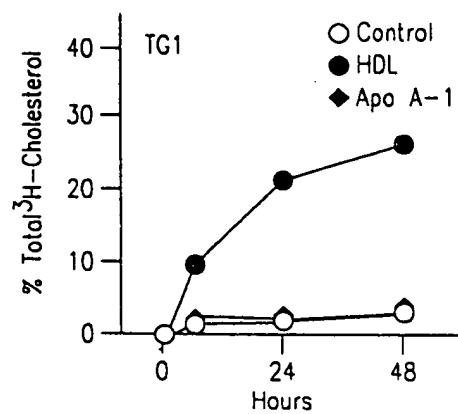


FIG. 1B

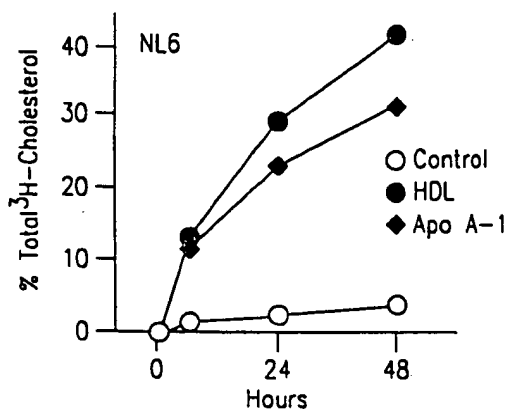


FIG. 1C

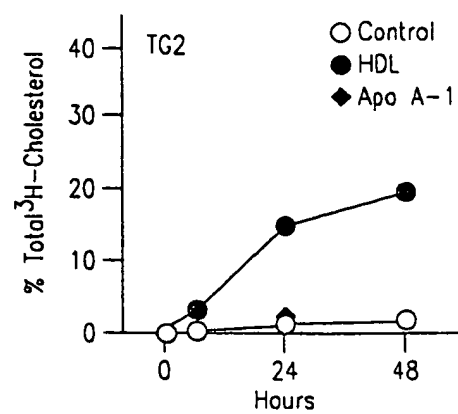


FIG. 1D

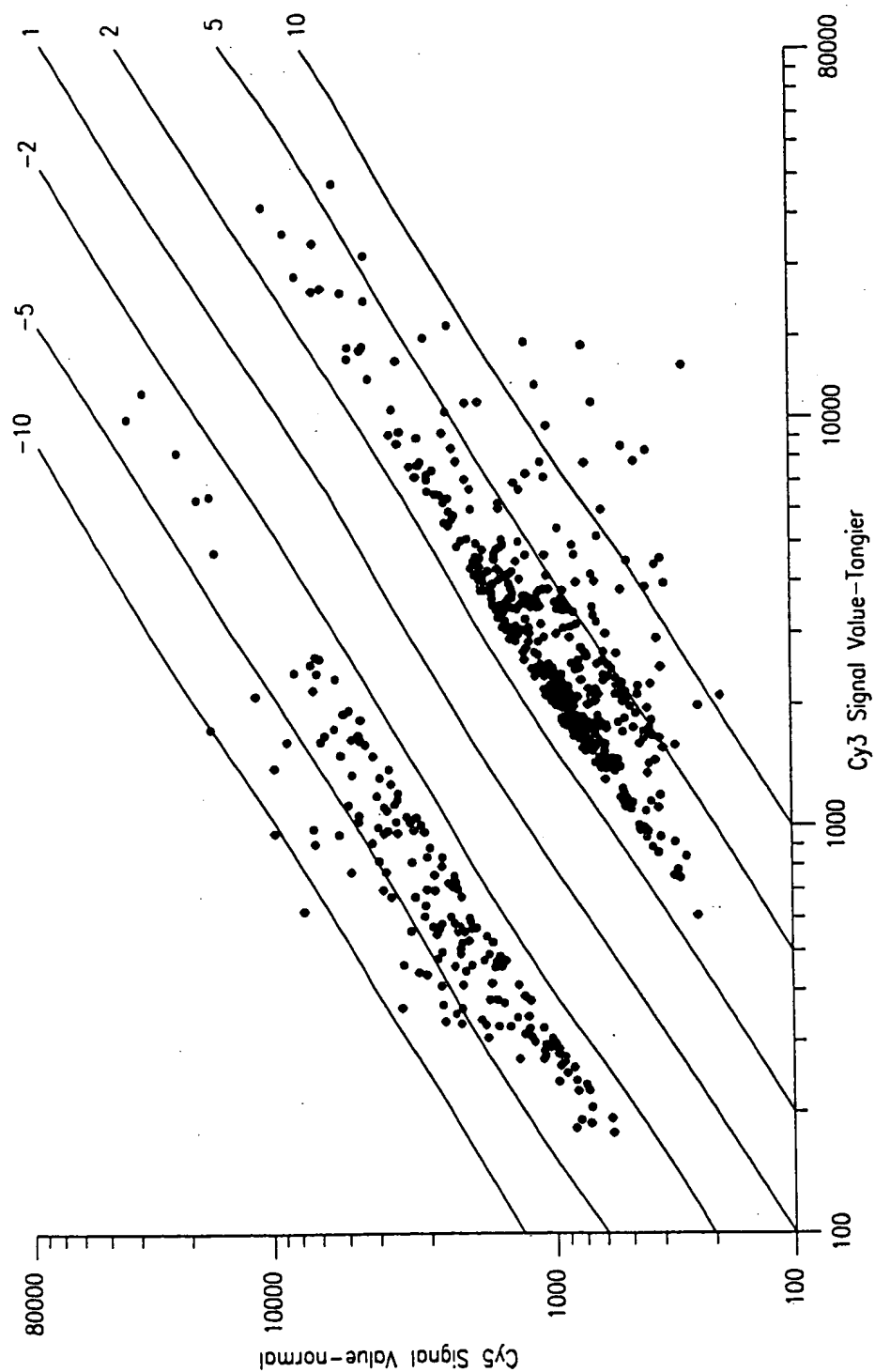
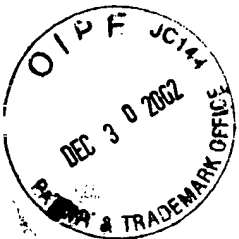


FIG. 2

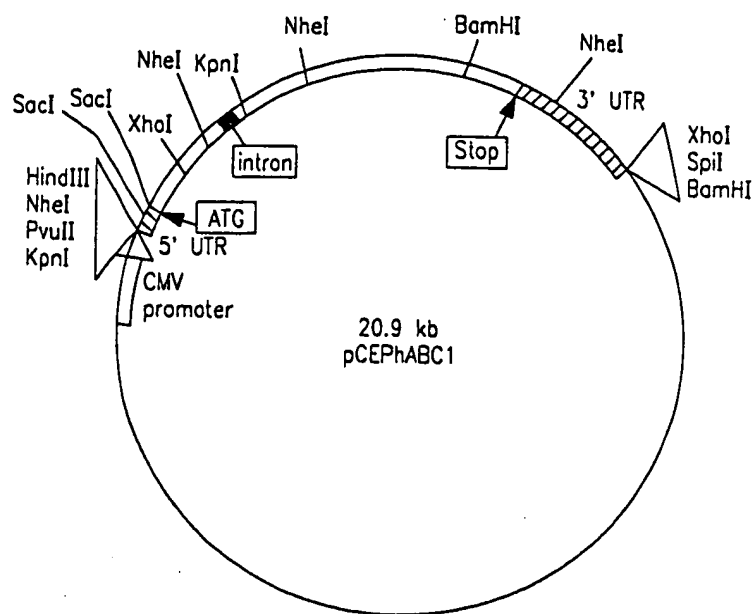


FIG. 3



CVT ABCA1 Gene Structure

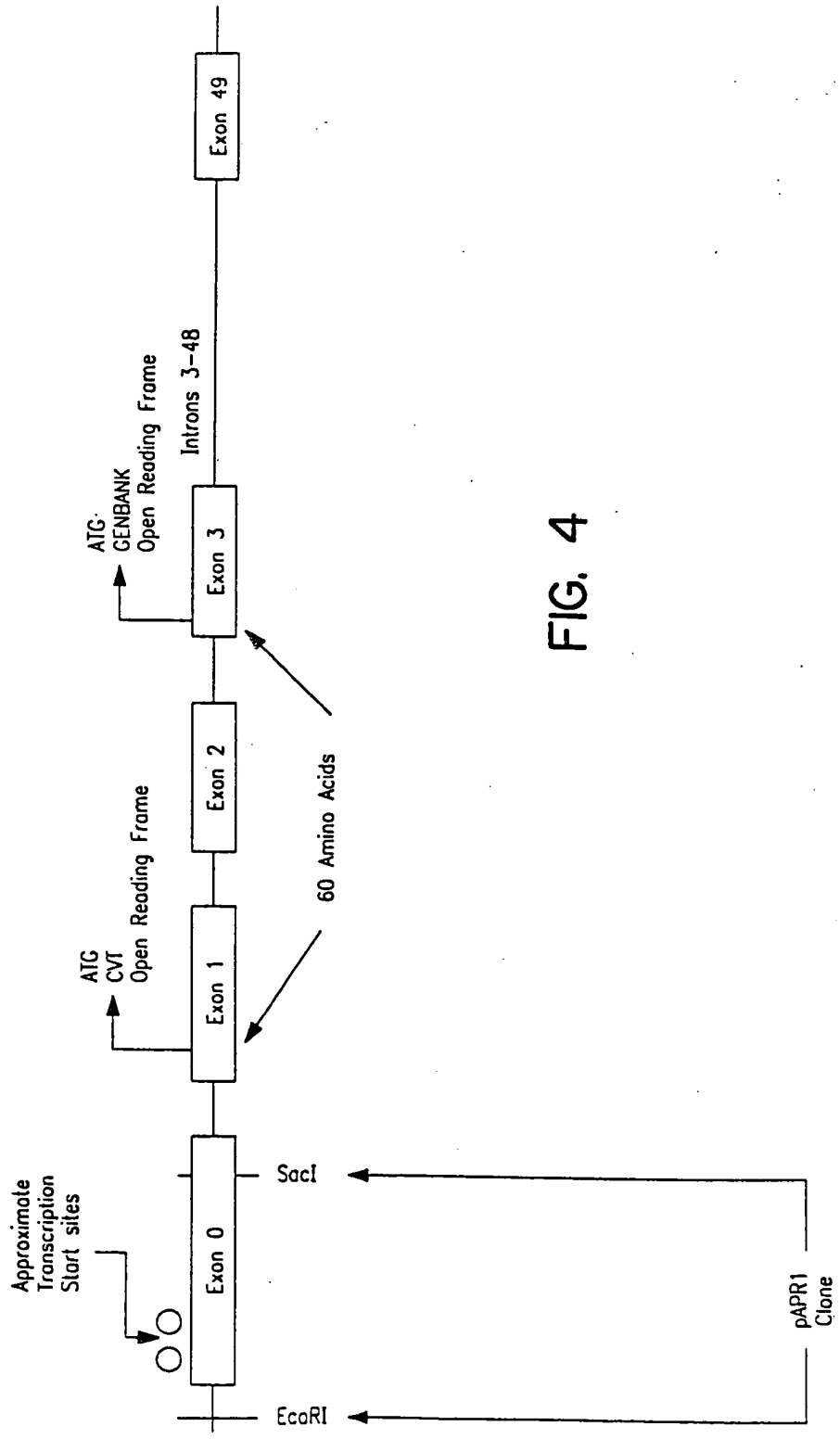


FIG. 4

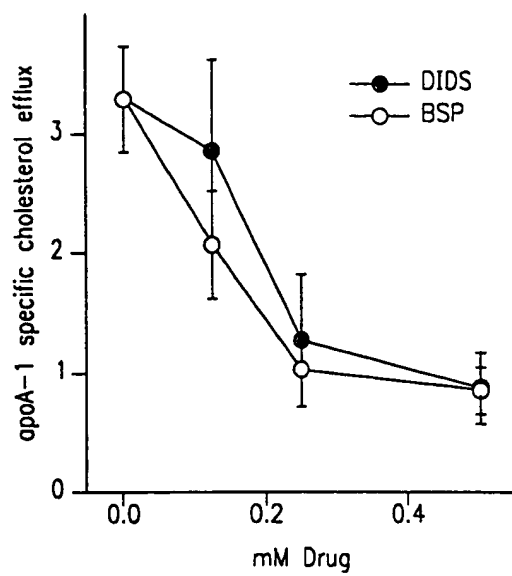


FIG. 5

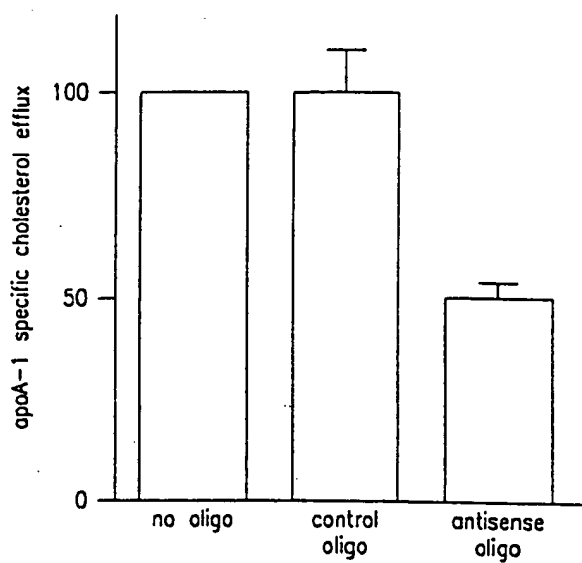


FIG. 6

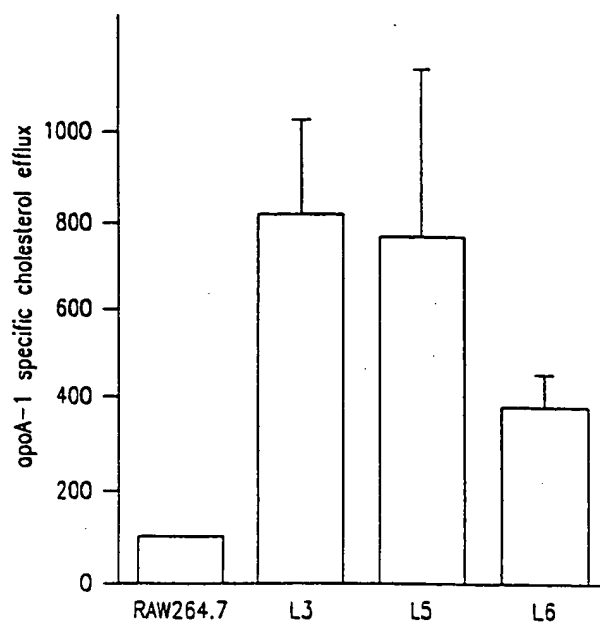


FIG. 7

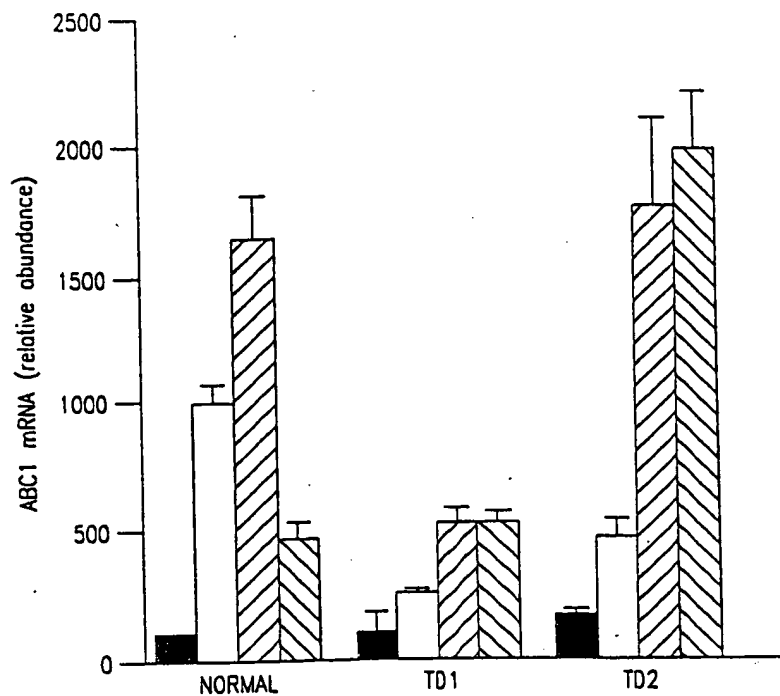


FIG. 8

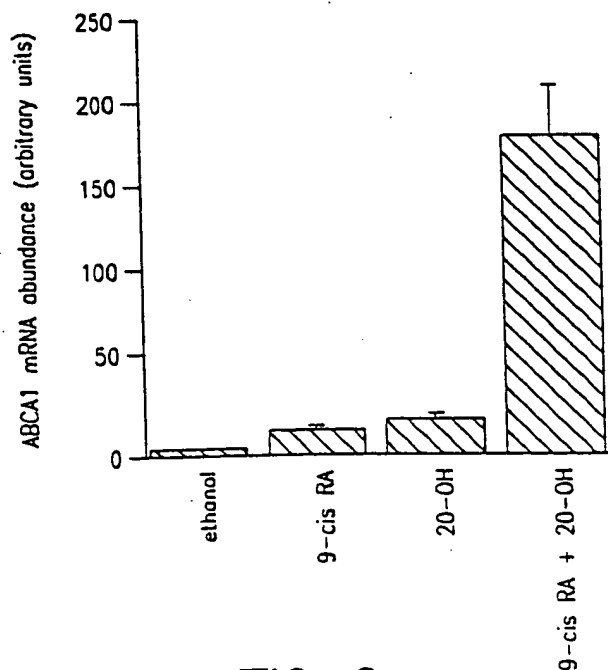


FIG. 9

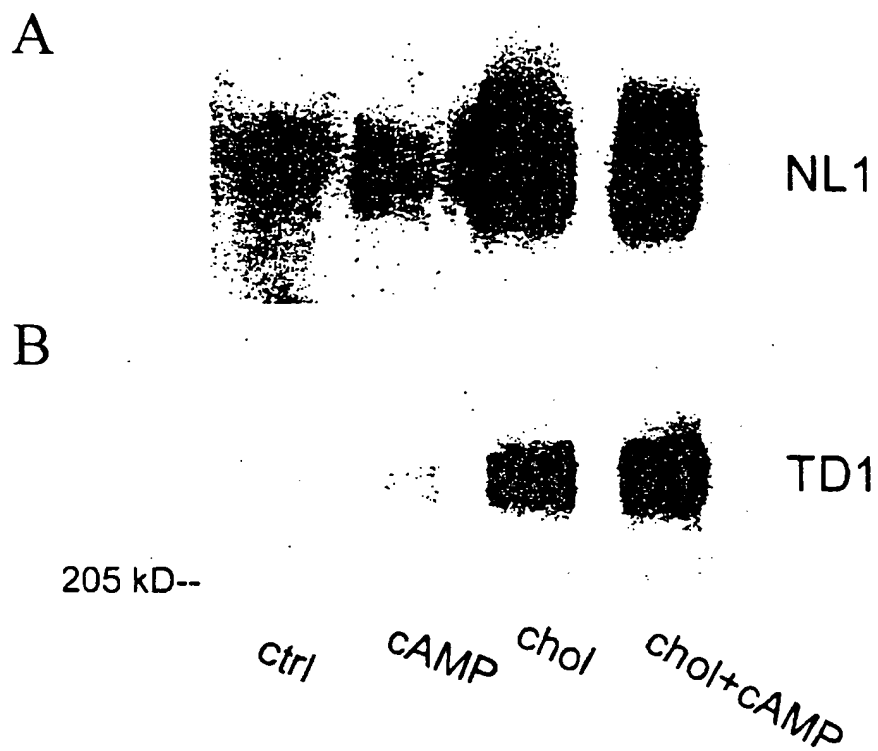
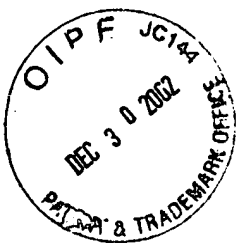


Fig. 10

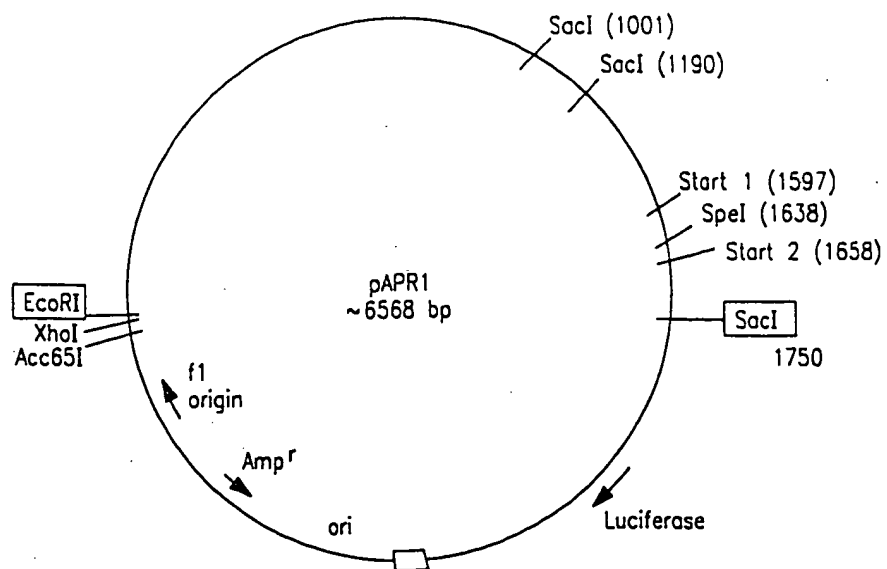


FIG. 11

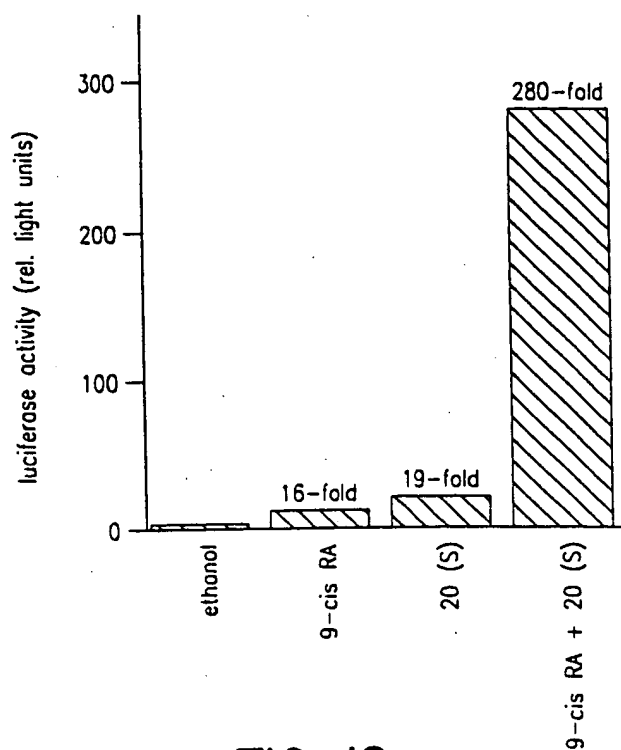


FIG. 12



ABCI gene 5' flanking region

1 GAATTCCTTGTGTGGCTCCACATGCACCTCCAGGGCTGCTTGGCTCTCTATATGGTCTGTCTGAGTGTGATAGAACCACTGATGTAGTACCTGG
101 GCTTGAGCGTGGCTGGAGATCCTGTTGACTGTAGCATGGAGGGGCTTGTGAGCTGAATGTCTGTATGCAAGGTGGGAGTTCTTGGGAATATGATGGAG
201 CTGGAGGTGGGAAGAGATAGGCTTGGGGCAGCTCTCTCATGCCACCTCATCTGGCCAAACTCAGGTCAAACCTGTGAAGAGTCTAAATGTGAATCTG
301 CCCTTCAAGGTGGCTACAAAGGTATCTTTGTCAAGGTAGGAGACCTTGTGGCTCCACGTGCACTTCCAGGGCTGCTTGGCCCTTCTACGGGTCTGTC
401 CTGAGTCTTCTATGAATCTCCCTTCAGGGCAGATTCAATATTAGACTCTTTCACAGTTTGACCTGAGTTTGGCCCAAGATAAGGTGACATTTAGTTTGTG
501 GCTTGATGAATGACTTAAATATTTAGACATATGGTGTAGGCTGCAATTCCTACTCTTGCCCTTTTGTGGCCCTCCAGTGTCTTGGGTAGTTTGTGCT
601 CCCCCTACAGCCCAAGGCAACAGATAGTTGGAGTCTGGAGTGGCTACATAAATTTTACACGACTGCAATTTCTCTGGCTGCACTTCAAAATGTATACA
701 AACTAAATACAAAGTCTGTGTTTATACAGGGAGGCTGATCAATATAATGAATTAAGGGGCTGGTCCCATATTTCTGTGTGTTTGTGTTT
801 GTTCTTTTGTGTTTGTGGCTCTCTCAATTTATGAAGAGCAGTAAGATGTTCTCTCGGTCTCTGAGGGACCTTGGGAGCTCAGGC
901 TGGGAATCTCCAAGGCAGTAGGTGCGCTATCAAAAATCAAAATCCAGGTTTGTGGGGGAAAACAAAAGCAGCCCATTAAGGAGGAGCTCTCTCTCCCCCAATCC
1001 CCCTCACCCCGCTAGGCTTTGAAAGGAAACAAAGACAAAGATAATGATTTGGCGTCTTGAGGAGATTTCAGCCCTAGAGCTCTCTCTCCCCCAATCC
1101 CTCCTCCGGCTGAGGAACTAACAAAGGAAACAAATTTGGGAAAGCAGGATTTAGAGGAGCAAAATTCACCTGTGCTCTTGGCTGCGGGGAAACGTG
1201 GACTAGAGAGTCTGCGGCGCAGCCCGAGCCCGCTTCCCGCGCTTTAGCCCGCGGCGGGGAGGGGAGCGGAGCCGCGGACCCCTAA
1301 GACACCTGCTGTACCTCCACCCCAACCCACCCCACTCCCCCACTCCCTAGATGTTGTCGTGGGCGGCTGAACGTGCGCCCTTTAAGGGCGGGGCCCC
1401 GGCTCCAGTGTCTTCTGTGAGTGAATGAACTACATAAAGAGAGCGGGGAGGAGGAGAGCAGAGGCTTTGACCCGATAGTAACCTTC
1501 TGGGCTTGGTGCAGCCGAATCTATAAAGGAACTAGTCCCGGCAAAACCCCGTAATTCGAGCGGAGAGTGAAGTGGGGCCGGGACCCCGCAGAGCCGAGCC
1601 GACCCCTCTCTCCCGGCTGCGGCAGGGCGGGGAGCTC (SEQ ID NO. 3)

transcription start site

TATA box

nuclear hormone receptor half site

LXR response element

Sp1 site

FIG. 13

ABCI gene 5' flanking region

1 GAAATTCCTTGCTGGTGGCTCCACATGCACTTCCAGGGCCCTGGCTCTTCTATATGGGTCTGTCTGAGTGTGATAGAACCACTGATGTGAGTACCTGGG
101 GCTTGAGCGTGGCCCTGGAGATCCCTGTTGACTGTAGCATGGAGGGGGCTTGTGAGCTGAAATGTCGTATGCAAGTGGTGGAGTTCCTGGAATATGATGGAG
201 CTGGAGTGGGAAGAGAGTAGGCTTGGGCAGCTCTCTCATGCCACCTCAATCTGGCCAAAACCTCAGGTCAAACTGTGAAGAGTCTAAATGTGAATCTG
301 CCTTCAAGGTGGCTACAAAGGTATCTTTGTCAAGGTAGGAGACCTTGTGGCCTCCACGCTGCACTTCCAGGGCCCTGGCTTGGCCCTCTTCTACGGGCTGTGCT
401 CTGAGTCTCTATGAATCTCCCTTCAGGGCAGATTCAATTTAGACTCTTTCACAGTCTTGACCTGAGTTTGGCCAGAAATAAGGTGACATTTAGTATTGTTG
501 GCTTGATGAATGACTTAATAATTTAGACATATGTTGTTAGGCTTGCAATTCCTACTCTTGGCTTTTTTTTTTGGCCCCCTCCAGTGTTTTGGGTAGTTTGTCT
601 CCCCCACAGCCAAAGGCAACAGATAAAGTTGGAGGTCTGAGTGGCTACATAATTTACACGACTGCAATTCCTCTGGCTGCACTTTCACAAAATGTATACA
701 AACTAAATACAAGTCTGTGTTTTTATCACGGAGGCTGATCAATATAATGAATAATTAAGGGGCTGGTCCCAATATTGTTCTGTGTTTTTGTGTTGTTT
801 GTTTCCTTTTTTGTGGCTCTCTCCTCAATTTATGAAGAGAGCAGTAAGATGTTCTCTCGGTCTCTGAGGACCTTGGGGAGCTCAGGC
901 TGGGAATCTCCAAGGCAGTAGTGGCTATCAAAAATCAAAGTCCAGGTTTTGTGGGGGAAAACAAAAGCAGCCCCATTAACAGAGGACTGTCCGCCCTTC
1001 CCTCACCCAGCCTAGGCCCTTGAAGGAAACAAAAGACAAGCAAAAATGATTGGCGTCTTGAGGAGATTACAGCCTAGAGCTCTCTCTCCCCCAATCC
1101 CTCCCTCCGGCTGAGGAAACTAACAAAAGGAAAACAAAATTTGGGAAAGCAGGATTTAGAGGAAGCAAAATCCACTGTGTGCCCTTGGCTGCCCGGGAACGCTG
1201 GACTAGAGAGTCTGCGGCGCAGCCCGAGCCAGCGCTTCCCGCGCTCTTAGGCCGCGGCCCCGGCGGGGAAGGGGAACGAGACCGCGGACCCCTAA
1301 GACACCTGCTATACCTCCACCCCCACCCCCACCTCCCCCAACTCCCCCTAGATGTGTGTTGGCGGCTGAACGTGCCCCGTTTTAAGGGCGGGCCCCC
1401 GGCTCCACGTGCTTCTGCTGAGTCACTGAACATATAACAGAGCCGGGAACGGGCGGGGAGGAGGAGACACAGGCTTGGACCCATGATAACCTTC
1501 TGGCGCTCGGTGCAGCCGAATCTATAAAGGAACCTAGTCCCGGCAAAAACCCCGTAATTCGAGCGAGAGTAGTGGGCGGGGACCCGCGAGCGCGAGCC
1601 GACCCCTTCTCCCGGCTGCGGCAGGGCAGGGCGGGGAGCTC (SEQ ID NO. 3)

→transcription start site

—TATA box

☐ nuclear hormone receptor half site☐ LXR response element

~~www~~ SPL site

FIG. 13